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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/064,463	07/17/2002	Richard Lee-Chee Kuo	ASTP0027USA	5813

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NAIPO (NORTH AMERICA INTERNATIONAL PATENT OFFICE)
P.O. BOX 506
MERRIFIELD, VA 22116

EXAMINER	
D AGOSTA, STEPHEN M	

ART UNIT	PAPER NUMBER
2683	

DATE MAILED: 11/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/064,463	KUO ET AL.	
	Examiner	Art Unit	
	Stephen M. D'Agosta	2683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,4,7 and 8* is/are rejected.

7)☒ Claim(s) *2,5 and 6* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 July 2002* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

Figures 1-3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 3-4 and 7-8 rejected under 35 U.S.C. 103(a) as being unpatentable over Oliveira US2002/0107025 and further in view of Hjelm et al. US 6,529,497 (hereafter Oliveira and Hjelm).

As per **claim 1**, Oliveira teaches a method for maintaining connectivity between a mobile unit and a base station in a wireless communications system, the mobile unit comprising a Radio Resource Control (RRC) used to establish at least a radio bearer when the mobile unit is within a service area of the base station and capable of releasing the radio bearer, the RRC comprising a plurality of internal states, each state

defining a connective relationship between the RRC and the base station (abstract and page 2, Paragraph #16 teaches a high-level overview of mobile-to-network communications which inherently requires setting up a bearer channel between mobile and network/BTS via a control/paging channel), the method comprising:

Detecting an in service condition of the radio bearer before expiration of the second timer (page 2, paragraphs #20-22 teach setting a first timer to "establish a maximum time period for a page response to be received from the mobile station"), and

Stopping the second timer to prevent expiry of the second timer so as to prevent releasing of the radio bearer (page 2, paragraph #23 teaches use of a second timer),

And when the RRC detects an out of service condition (eg. handoff condition, see page 2, paragraph #18 which teaches MAHO).

But is silent on Starting a second timer as the result of the expiration of a first timer when the RRC is in a CELL-PCH state or a URA-PCH state for an established radio bearer.

The examiner notes that while Oliveira teaches use of multiple timers he does not specifically teaches timer(s) for bearer channel release (eg. when one has already been setup).

Hjelm teaches a timer being started for a channel (previously setup) when no more traffic is ongoing on said channel that keeps said channel established/available without the need to activate a new channel (abstract, figure 4a, see 4a-4a, figures 4c to 4e teach timers, C2, L64 to C3, L11, C6, L6-19. The examiner also notes that Hjelm teaches dynamically setting the timers C10, L64 to C11, L3 which provides motivation for changing the duration for each timer(s)).

With further regard to claims 7 and 8, Oliveira teaches the RRC entering a CELL-FACH state in which the mobile unit is known to the base station on a cell level, no dedicated channel is allocated to the mobile unit, and the mobile unit is assigned a default common or shared transport channel for uplink and downlink (page 2, paragraphs 18-23 teach the mobile being registered and serviced by various cells and hence can be "in use" or "idle" with no dedicated channel allocated).

With further regard to claim 8, Oliveira teaches use of three timers (page 2, paragraph #25). Hence one skilled would use a third timer to "limit a duration used by the RRC to detect an in service condition of the radio bearer before the RRC releases allocated resources and enters an Idle Mode".

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Oliveira, such that starting a second timer as the result of the expiration of a first timer when the RRC is in a CELL-PCH state or a URA-PCH state for an established radio bearer, to provide means for checking twice, via two timers, if the channel should be released and/or kept connected for further use should more data need to be transmitted.

As per **claim 3**, Oliveira/Hjelm teach the method of claim 1 **but is silent on** wherein the first timer is used to indicate timing of a periodical Cell Update procedure.

The examiner notes that Oliveira first discusses a list of candidate cells that can be used for communications to/from the mobile (page 2, paragraph #18) and also searching for the mobile via paging and use of timers (page 2, paragraph #21-23) which reads on "wherein the first timer is used to indicate timing of a periodical Cell Update procedure" since updates are perpetuated through the network to the MSC as timers run.

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Oliveira/Hjelm, such that the first timer is used to indicate timing of a periodical Cell Update procedure, to provide means for setting predetermined limits on how long cell updates can occur/take.

As per **claim 4,** Oliveira/Hjelm teach the method of claim 1 **but is silent on,** wherein the second timer is used to limit a duration used by the RRC to detect an in service condition of the radio bearer before the RRC releases the radio bearer and enters an Idle Mode.

Oliveira does teach use of multiple timers as pointed out in previous claims.

Hjelm teaches a timer being started for a channel (previously setup) when no more traffic is ongoing on said channel that keeps said channel established/available without the need to activate a new channel (abstract, figure 4a, see 4a-4a, figures 4c to 4e teach timers, C2, L64 to C3, L11, C6, L6-19).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to modify Oliveira/Hjelm, such that the second timer is used to limit a duration used by the RRC to detect an in service condition of the radio bearer before the RRC releases the radio bearer and enters an Idle Mode, to provide means for setting predetermined limits on how long the channel will be held before it is ultimately released.

Allowable Subject Matter

Claims 2, 5 and 6 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

These claims, when incorporated into their independent claim, recite a highly specific design that is not found in the prior art cited and therefore novel in the examiner's opinion. The combination of claim 1's teachings of cell timers in a CELL_PCH and/or a URA_PCH state along with the objected to material is novel.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1. Hicks US 6,493,552
2. Moshiri-Tafreshi et al. US 2002/0160812
3. Kari US 6,243,579
4. Gilchrist et al. US 5,745,695
5. Lekven et al. US 5,884,196

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. D'Agosta whose telephone number is 703-306-5426. The examiner can normally be reached on M-F, 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Trost can be reached on 703-308-5318. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Stephen D'Agosta